

HIV/AIDS AND PACIFIC ISLAND REGIONAL FISHERS AND SEAFARERS: INFORMATION, EDUCATION AND COMMUNICATIONS NEEDS AND AVAILABLE RESOURCES

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ABSTRACT: Seafarers, including deep-sea fishermen, have an increased risk of HIV and other STIs because of the high prevalence of risk behaviors in this group and their high degree of mobility. The situation of fishers and seafarers from the Pacific region is described with a focus on information, education and communication (IEC) aimed at preventing HIV/AIDS in this group. The Pacific context for HIV/AIDS is outlined, and the IEC materials that are available in the Pacific region, including print-based materials, video and audio productions, mass media and drama, are assessed, particularly in relation to their effectiveness in addressing cultural factors that predispose this group to take risks, such as resistance to using condoms. The challenges for IEC in the Pacific region include the basic literacy level of the target group, the requirement for materials to conform to social and religious mores, and the need for appropriate illustrations. The Secretariat of the Pacific Community works with national governments, maritime training institutions and donors to strengthen prevention initiatives aimed at this group. The effectiveness of the information components of these initiatives is reviewed.

KEYWORDS (LCSH): Fishers—Oceania—Health and hygiene; HIV Infections—Social aspects—Oceania; HIV Infections—Oceania—Statistics; HIV Infections – Prevention and control—Oceania; Sexually transmitted diseases—Oceania; Sailors—Oceania—Sexual behavior.

Seafarers, including deep-sea fishermen, have an increased risk of HIV infection because of the high prevalence of risk behaviors in this group and their high degree of mobility. In addition to these general characteristics, Pacific Island seafarers have a unique work environment and set of cultural parameters. Consequently, special strategies are required to effectively communicate HIV information to this audience (Armstrong 2000; Borovnik 2003; Hogan 2005; Jenkins 1994b; Peteru 2002).

Pacific Island seafarers are an itinerant, typically all-male work force who spend long periods at sea away from home. While at sea, cultural factors that contribute to risk

taking among this group generally fall under the heading of the ‘seafaring lifestyle’, which allows for very low condom use, excessive alcohol consumption, multiple sex partners, group sex, commercial sex and the development and circulation of lore or misinformation on HIV. Furthermore, Pacific Island seafarers typically subscribe to the traditional gender roles and attitudes that remain dominant in the region, and are resistant to talking openly about sex and sexual health or negotiating safe sex with their partners. Other factors are a lack of fluency in English coupled with a generally low level of literacy. Information, education and communication (IEC) materials are used by various agencies to contribute to behavior change. For these to be successful, all these factors must be considered in producing the materials.

In 1990, the South Pacific Commission (now the Secretariat of the Pacific Community) (SPC) surveyed 14 of its 22 member countries on HIV/AIDS/STD issues. The survey concluded that the need for information was the first priority for 9 out of 14 respondents (SPC 1990). In 2004, the ADB-funded Coastal Fisheries Management Development Project (CFMDP) in Papua New Guinea (PNG) surveyed coastal fishing communities and concluded that information was the primary need identified by all stakeholders in fisheries communities, including information on HIV/AIDS (Des Rochers personal communication). An SPC review of HIV/AIDS and STI information materials in 2004 found that there was a huge information gap in the Pacific. Some countries (e.g. Fiji) had good print and video materials, while others (e.g. Kiribati, Solomon Islands, Samoa and PNG) had no current IEC materials (Drysdale 2004). Access to IEC materials in rural areas is a consistent problem.

This paper includes an overview of HIV/AIDS in the Pacific region, a description of the ‘seafaring lifestyle’ in relation to HIV, and a brief discussion of other factors that contribute to risky behavior, such as economics, gender attitudes, language and literacy. The information needs of seafarers and fishers are discussed in this context and a sample of available information and communication resources, including training in the region, is given. This sample is not exhaustive: it is difficult to identify and secure ephemera such as grassroots literature in the Pacific. The paper focuses on Kiribati, PNG, Fiji and Tuvalu as these countries supply most of the region’s seafarers.

In the Pacific region, as in Africa, HIV/AIDS is predominantly a heterosexual problem. Table 1 presents current data on HIV/AIDS incidence in the Pacific.

Table 1: HIV/AIDS incidence in Pacific Island countries for 1999, 2002 and 2004, and the cumulative incidence per 100,000 people.

Country	HIV including AIDS as at 1999	HIV including AIDS as at December 2002	HIV including AIDS as at December 2004	Mid Year Population (June 2004)	<i>Cumulative incidence rate</i> <i>per 100,000 (95% CIs) 2004</i>
American Samoa	0	2	3	62,600	4.8 (1.0 to 14.0)
Cook Islands	0	0	2	14,000	14.3 (1.7 to 51.6)
Federated States of Micronesia	2	11	25	112,700	22.2 (14.4 to 32.7)
Fiji Islands	43	100	182	836,000	21.8 (18.6 to 24.9)
French Polynesia	181	216	243	250,500	97.0 (84.8 to 109.2)
Guam	108	168	168	166,100	101.1 (85.9 to 116.4)
Kiribati	28	38	46	93,100	49.4 (35.1 to 63.7)
Marshall Islands	9	9	10	55,400	18.1 (8.7 to 33.2)
Nauru	1	1	2	10,100	19.8 (2.4 to 71.5)
New Caledonia	185	234	272	236,900	114.8 (101.2 to 128.5)
Niue	0	0	0	1,600	-
Northern Mariana Islands	15	38	25	78,000	32.1 (20.7 to 47.3)
Palau	1	4	8	20,700	38.6 (16.7 to 76.1)
Papua New Guinea	1,741	4,415	10,184	5,695,300	178.8 (175.3 to 182.3)

Pitcairn Islands	0	0	0	50	-
Samoa	9	12	12	182,700	6.6 (3.4 to 11.5)
Solomon Islands	1	1	5	460,100	1.1 (0.4 to 2.5)
Tokelau Islands	9	0	0	1,500	-
Tonga	11	12	13	98,300	13.2 (6.3 to 21.3)
Tuvalu	0	9	9	9,600	93.8 (42.9 to 178.0)
Vanuatu	0	1	2	215,800	0.9 (0.1 to 3.3)
Wallis and Futuna	2	2	1	14,900	6.7 (0.2 to 37.4)
Total	2,325	5,2733	10,645	7,444,100	143.0 (140.3 to 145.7)

All data are supplied by official country reporting authorities.

Reported cases do not reflect total disease burden. Case numbers are influenced by access to testing, testing uptake & notification rates.

Compiled from SPC Sources: AIDS Section, Public Health Program, Secretariat of the Pacific Community (www.spc.int/aids) (7th June 2005); and (SPC 1999)

However, these statistics may not reflect the true situation because of inadequate reporting. Wendy Armstrong, former SPC HIV/AIDS specialist, claims the figures for HIV infection rates are inaccurate for Kiribati and that at least 300 people there have HIV (Armstrong 1998). A recent SPC study in the Marshall Islands showed that although there have been few cases of HIV infection, the lack of HIV testing equipment is likely to be one reason for the low number of reported cases. Testing can take up to one year because of processing delays (Vunisea 2005a).

HIV was most likely brought to the Pacific region by seafarers. The first reported HIV infection in Fiji was in a seafarer, and the first two officially reported HIV positive cases in Tuvalu were both in seafarers (Armstrong 2000). Tuvalu has 1200 persons registered as seafarers or fishers; the country has nine cases of HIV, seven of which relate to seafarers (Hogan personal communication). As of December 2004, there were 46 cases of HIV/AIDS in Kiribati, with seafarers and their wives accounting for 19 of the cases. In Kiribati, infection among seafarers and their wives continues to increase (Peteru 2002). In 2001, Norati Antera, president of the Kiribati Islands Overseas Seamen's Union (KIOSU), recalled that in the 1990s in Kiribati, HIV/AIDS was perceived as 'all myths, nobody believed it, nobody. . . We thought we wouldn't

get it, were so far away, so isolated, but then we watched the figures increasing tremendously’.

The infection rates are significant not only in terms of individual human misery but also because of the wider impact on the region given the economic importance of seafaring and fishing in the Pacific. There is a strong cultural imperative to earn money and send it home (Borovnik 2003). Remittances are considered obligatory and vary between 50 and 70% of their salaries (Borovnik 2003). Seafarers themselves report that the amount varies with amounts spent on alcohol and sex (Clark 2003). In Kiribati, seafaring remittances form approximately 25% of the gross national product (GNP) and in Tuvalu, remittances account for 30% of GNP (Clark 2003). In 2003, SPC reported that each seafarer supported an average of seven people in Tuvalu, eight in Kiribati and six in Fiji. Some seafarers reported supporting as many as 30 people at home (Dennis 2003).

There are approximately 2000-3000 sailors in PNG (Jenkins 1994b). Fisheries (and in particular tuna) constitute an important export industry for PNG, with a value in 2002 of PGK 250 million. It is clear that with HIV infection predominantly affecting working-age populations in the Pacific region, and with much of the region dependent on income from fishing and seafaring, that HIV/AIDs will have a profound impact on the region.

Appeals from regional HIV/AIDS workers and trainers at fisheries institutes for basic community education attest to the need for ongoing information and education for this group. Peteru’s study (2002) showed that 65% of interviewees could not describe HIV/AIDS or its mode of spread. Interviewees admitted that though they had training in HIV/AIDS awareness, they could not remember most of the information (Peteru 2002). Most of the correct responses came from seafarers under 25 years, showing that HIV education must be continually reinforced.

While most seafarers are aware that condom use can prevent HIV transmission, very few use them. Armstrong comments on fishers’ sense of invincibility and on their idea that the benefits of unprotected sex outweigh the risks (Armstrong 1998). Armstrong (1998), Jenkins (1994b), Peteru (2002) Hogan (2005) and the WHO (2005) all report the same finding: the majority of seafarers do not use condoms at sea or at home.

Many seafarers also state that they have never been shown how to use a condom (Peteru 2002; Armstrong 1998; Borovnik 2003). In her situational analysis of Pacific Island seafarers, Armstrong reports that seafarers may not know how to use condoms because the condoms available on board are bought in bulk and are wrapped in plain foil without instructions or illustrations. This is also the case for some STD clinics, where condoms are wrapped only in newspaper. Maritime colleges that offer HIV/AIDS and STD sessions may not actually discuss how to use condoms (Armstrong 1998).

In response to a question regarding the reasons for practicing unsafe sex, ‘drinking too much alcohol’ was the answer given by 79% of Tuvaluan sailors, 79% of I-Kiribati sailors and 81% of Fijian sailors (Dennis 2003). Jenkins (1994b) reports that many PNG

seafarers 'admitted they were often too drunk to take notice and, even if they had condoms with them, too drunk to remember to use them'. Borovnik quotes an interview with a seafarer who expressed the same sentiment among I-Kiribati seafarers.

How was it when you were on the ships or when you were on shore?

We know it, but sometimes, when we get drunk, we forget about it. <laughs> Forget about the AIDS.

You didn't use condoms?

Yes...No, we don't....we did not use the condom. We just go with the women (Borovnik 2003).

Hogan (personal communication) and Armstrong (1998) emphasize that to be effective in behavioral change, information and education materials must acknowledge the issue of alcohol-related behaviors.

Multiple sex partners and group sex are also part of the 'seafaring lifestyle'. Seafarers report as many as 20 sex partners each year (Peteru 2002) with those aged between 35 to 50 years having the greatest number of partners. Seafarers under 35 years of age (when experience with high school health education programs is more recent) tend to have fewer partners and to be more aware of HIV and the need for condom use (Peteru 2002). This suggests that education works to some extent. In addition to non-use of condoms, fishers and seafarers engage in risky sexual behaviors such as group sex (Jenkins 1994b; Peteru 2002). Other factors that influence risky behavior include economics, gender attitudes, low education and literacy levels, fishermen's lore, language and religion.

Young Pacific Island women perceive that seafarers have a good socio-economic standing within their own communities. Wanting to obtain economic security themselves, they are drawn to sexual relationships with seafarers who infect them with STIs because they and the seafarers are drunk and do not use condoms, or they lack the power to insist that seafarers use condoms. If the aim of IEC materials is behavior change, the materials must also address gender attitudes.

Gender attitudes are tied to income-earning and economic power structures within personal relationships. In traditional patriarchal Pacific Island countries, women have little or no ability or authority to negotiate safe sex when their partners return home from long-distance fishing or seafaring. Traditionally, it is uncommon for women in Kiribati to ask too many questions about the behavior of their husbands or to mistrust them, and cultural taboos exist against discussing sex, infidelity or sexual behavior, including the use of condoms (Borovnik 2003). According to Borovnik (2003), I-Kiribati women are committed to traditional gender roles and to religion, and will 'risk AIDS infection and death rather than discuss the subject or use condoms' with their husbands when the men return from sea. In an interview, one woman told Borovnik that 'she didn't care, because she loved him and if they both got AIDS they would die together' (Borovnik 2003). Another woman claimed that she trusted her husband 'because he was a church member

and involved with church activities' (Borovnik 2003). When seafarers' wives and partners have talked to their husbands about their concerns about HIV and AIDS, the seafarers have tended to react 'unfavorably, and therefore the chance of having a fair conversation with fair consequences for wives is low' (Borovnik 2003). The Kiribati situation is not unique. Jenkins (1996) states that in PNG, 'men are dominant in both public and domestic affairs...women are generally considered a danger to men as a source of pollution which threatens to weaken male strength.' In addition, PNG culture forbids talking publicly about sexual matters. In Tuvalu, however, there appears to be a greater willingness among stable partners to discuss sex and sexual health (Armstrong 1998).

Education and literacy levels determine comprehension of written materials as well as the reader's acceptance of the credibility or value of the materials. As one HIV worker in Fiji reported in 2004, 'written materials are only beneficial to those who can read' (Drysedale 2004). In PNG, Jenkins (1993) found that 28% of the population had no formal education and approximately 45% had only one to six years of education. The WHO study on seafarers in Kiribati found approximately 75% of seafarers had some level of secondary education (WHO 2005), but Dennis's work qualifies this figure by explaining that many seafarers have completed only two or three years of secondary school (Dennis 2003). The latter also found that in Tuvalu most seafarers had attended only primary school, and some had never attended school. The literacy rate in 1999 in PNG was 28.2%, in Kiribati 40%, in Tuvalu 45% and in Vanuatu 33.5% (Crowl 1999).

Miscommunication or the creation and circulation of mythology rather than information is another problematic issue among fishers. Jenkins (1994b) reported that in PNG, sailors have a great deal of lore around STIs and folk cures. All of the sailors interviewed by Jenkins knew of HIV and the majority knew it was fatal, but some refused to believe it could not be cured. Jenkins cites one example of such lore:

...one older captain stated he never got STDs because his father taught him always to feel the area above the pubic bone and below the navel of a woman first. If it felt warm to the touch, she was infected and he should not have sex with her (Jenkins 1994b).

Armstrong reported that in Kiribati some seafarers believed that a cure for HIV/AIDS had been discovered, and so there was no need to worry. This misconception came from the local newspaper which published an excerpt on drug therapy from an international journal (Armstrong 1998). Although there appears to be a relatively high level of HIV/AIDS awareness within the fishing and seafaring community, this awareness is superficial and rife with misinformation. Problems are also caused by inadequate training and IEC materials that are too technical, not relevant to the local cultural environment or require too high a literacy level.

Another issue, detailed by Des Rochers and Ame (2005), is that information dissemination is poor among remote coastal fishing communities. In some islands

communication and information systems are unreliable or do not function at all because of the widely dispersed and remotely located population and the lack of infrastructure. Some towns are accessible only by boat, and high petrol costs restrict travel. Literacy rates, particularly among girls and women, are low. There are hundreds of different languages in the coastal areas, and wide cultural disparities (Des Rochers & Ame 2005).

IEC materials on HIV/AIDS must be produced in the Pacific languages. PNG alone has over 800 languages. Taken as an area, PNG, Solomon Islands and Vanuatu make up one of the most linguistically diverse regions of the world. Dennis finds unequivocally that the low level of competency in English comprehension and expression is a particular concern (Dennis 2003). I-Kiribati working on Korean or Japanese vessels reported to Borovnik (2003) and to Armstrong (1998) that language is an issue: English is poorly spoken among the crew and many I-Kiribati seafarers do not understand information in English when a foreign captain or first officer talks to them about HIV/AIDS (Armstrong 1998). In a related comment, Peteru (2002) found that of the available resource materials, the booklets that targeted seafarers with simple language and provided basic information on HIV and STI prevention were written only in English. To be successful, printed materials must be simple, with few words, and written in Pacific Island languages. Armstrong's work for SPC indicated that IEC material prepared for seafarers participating in training course must be in the local language and appropriate for their literacy level, and that the copyright should allow adaptation of the materials to local customs and languages (Armstrong 1998).

SPC encourages the translation and adaptation of its works as long as proper permission is sought. For example, the recently published *ABCDs of HIV/AIDS*, (Drysdale & Le-bars 2004) is a comic-book style booklet for adult audiences. It does not specifically target sailors or fishers but is intended as a teaching tool for prompting discussion, and includes a glossary and teaching tips. The main character is a gecko named Jecko, and he can be seen in a series of similar booklets as part of a collection called 'Jecko's Pacific Tales.' The *ABCDs of HIV/AIDS* has been released to the Pacific Resources for Education and Learning (PREL) in Hawaii and has been translated by PREL into six Marshallese languages. With over 10,000 sailors moving through Majuro (the capital of the Marshall Islands) each year, some of these will reach the seafaring community. The University of Papua New Guinea has recently expressed interest in translating *The ABCDs of HIV/AIDS* into PNG languages.

Information for the Pacific must also consider specific regional social and religious mores. In a 2000 report to the Heads of Fisheries meeting on the HIV/AIDS/STD prevention project, SPC admitted that information is always gauged so as to 'constantly weigh the benefits of preventing STDs against offending anyone in the community and that efforts were made to extend the project to other concerned groups including seafarers' spouses' (SPC 2000). Hogan has indicated that maritime and fisheries colleges may resist using visual materials that they consider too graphic, and therefore offensive.

He cited instances in which two New Zealand films dealing with alcohol abuse were rejected.

Seafarers currently receive HIV/AIDS/STI information from a variety of sources including SPC, shipping agencies, maritime and fisheries training institutes, national prevention and awareness programs, national Ministries of Health, and NGOs. For these to be effective, the seafarers themselves must feel ownership of the materials (Peteru 2005), but as Peteru reports, seafarers are very critical and discerning about which IEC materials they will read:

IEC materials may be accessible, but it appears that they do not appeal to the seafarers. Likewise seafarers largely refuse to accept the information provided to the shipping agents for distribution. Complaints made about the IEC materials include the large size of the booklets/folders and lettering on the covers as well [sic] the lack of real-life images portraying symptoms of STIs and HIV (Peteru 2002).

Peteru's report (2005) suggests that IEC materials should be:

- weather-proof and printed on glossy paper in full color;
- no larger than A4 size;
- written in the vernacular;
- illustrated using realistic drawings or actual photos related to HIV/AIDS/STI and condom-use.

As Des Rochers and Ame (2005) describe, a variety of IEC strategies have to be used for remote coastal fishing communities with problems of information dissemination and cultural restraints. Effective strategies include talking directly with fishermen and women, and working with church and women's groups, village leaders and teachers. Other strategies include using theater groups and video. Whether oral or written, information should be in the local language. The communication medium needs to be chosen carefully with high technology often not the best choice. Brochures need to be concise with sufficient words to give adequate information but without any extra text. Images should represent village realities, must be clear and not open to misinterpretation. Posters should offer solutions to problems, deliver a valid message, and seek to inform and influence people's behaviors. Radio is rapid and persuasive, and typically is one of the only reliable technologies for reaching remote villages; television is not available (Des Rochers and Ame 2005).

The only regional IEC materials for seafarers have been produced by SPC through its work on HIV/AIDS or through SPC's Marine Resources Division. In general, the main source materials come from the former SPC HIV/AIDS and STD Project. SPC also produced the *Pacific Regional Strategy on HIV/AIDS (2004–2008)*. Endorsed by the Pacific Island Forum leaders in 2004, it is the central platform for directing the fight

against HIV/AIDS in the Pacific. The strategy has four components: leadership and governance; access to quality services; regional coordination; and program management.

Materials for sailors produced by SPC include a poster (*Sail safely – use condoms*) that adapts a *Safety at sea* sticker with a condom message, and a video, *HIV and AIDS information for seafarers, Pacific version* (1995). This 12-minute video, aimed at merchant seamen, was originally produced by the United Kingdom Health Authority, and was adapted and reproduced for regional use by SPC. It uses two claymation characters (a knowledgeable captain and a reluctant helmsman) to teach about the transmission and prevention of HIV, both on board and ashore. It combines basic medical information and also addresses the issues of the culture of reluctance to discuss sex as well as the pervasive non-use of condoms. The HIV/AIDS Section of SPC has also produced posters and material that are not particular to seafarers.

Other IEC methods are aimed at instructors or at HIV workers. SPC has provided an itinerant workshop on a boat that travels among the Solomon Islands, through the Lutheran Shipping Company. There are about 35 peer educators from six islands working on board ships manned by Pacific Islanders (SPC 2002).

Videos are being used in the region to train sailors and seafarers as part of maritime training institute programs. They include three videos on socially responsible seafaring lifestyles: *Setting a new course for health* (16 min); *Dead ahead* (focusing on AIDS; 12 min); and *Drugs – way off course* (17 min).

SPC's HIV/AIDS Section has a number of other videos that can also be used in maritime and fisheries training institutes, although they do not focus on the industry. *Mr. Right Guy* (2005) is an interactive CD for youth; *AIDS in the Pacific: A cause for concern* is a 26-minute video describing the nature of the HIV/AIDS epidemic in the Pacific and what governments and NGOs are doing about it. It uses examples from Pacific Island countries including PNG, Fiji, the Marshall Islands, and Samoa. *Charlotte's story* is a highly acclaimed 20-minute video in which a Samoan mother talks about the experience of losing her son, who died of AIDS. It aims to encourage parents to talk more openly with their children about AIDS. Wan Smolbag, a ni-Vanuatu community theatre group for social change, created the award-winning *Like any other lovers*, a 54-minute film shot on location in Vanuatu in 1993. It tells the story of Chris and Linda, a young couple whose relationship is threatened when Chris learns he is infected with HIV. The film aims to encourage people to care for those with HIV/AIDS. In 2004, Wan Smolbag produced a new HIV video (*Sorry Suzy*), which was released with accompanying comic book materials. SPC's Regional Media Centre, in collaboration with USP, produced *Maire*, a 40-minute video that shows a young HIV-positive Tahitian woman living a normal life. In Kiribati, the Nei Tabera Ni Kai Video Resource Unit produced an AIDS video that is distributed widely in Kiribati and played in community halls (Drysdale 2004). *Better safe: AIDS & the South Pacific* is produced by Family Planning Australia, and is available in Hindi, Fijian, Samoan, and Tongan. *Taboo talking: down here* tries to

encourage talking about sex. It is also produced by Family Planning Australia and is available in Fijian, Samoan, and Hindi.

Other SPC resources relating to video and theatre include *Theatre against AIDS in the Pacific 1998: Building on our cultures*. This 37-page book is intended to promote the use of theatre as a tool in the fight against AIDS, and to raise the interest of donors in supporting this technique. It offers examples of theatre groups from around the Pacific, including Kiribati, PNG, Vanuatu, Solomon Islands, French Polynesia, New Caledonia, Guam, the Cook Islands, Fiji and the Marshall Islands. *Drama in community AIDS education 1998* is a 12-page booklet providing practical information on the effective use of drama as a technique to raise awareness and debate about AIDS, or other social, behavioral or political issues. *Video discussion guide* is a short guide to the use of two videos (*Charlotte's story* and *Like any other lovers*), which includes suggestions for encouraging discussion.

Two SPC resources relate to care of HIV-positive patients. *Caring for people with AIDS: A community resource* is a 33-page booklet that gives practical advice to the caregiver, particularly in countries where AIDS treatment drugs are unavailable. It includes information on hygiene, how to cope with health problems commonly experienced by people with HIV/AIDS, caring for a child with HIV/AIDS, and death and dying. *Nutrition, HIV and AIDS: A handbook for Pacific Island health workers* is a 34-page booklet that helps community health workers and nutritionists advise people living with HIV/AIDS about the foods they should eat to stay healthy, and how to adapt a diet to cope with specific health problems. It is based on the use of traditional Pacific Island foods and includes recipes.

Some countries have produced IEC materials that target seafarers. In PNG, the Institute of Medical Research (IMR) produced a comic book in Pidgin, *Pati long sip* that has been popular with seafarers. SPC has translated this into English, as mentioned above.

The development of information on HIV/AIDS is an important component of some national fisheries projects. During the initial planning phase of the PNG Coastal Fisheries Management and Development Project (CFMDP), the importance, and current lack of information on HIV/AIDS, was identified as the most important issue for PNG fishers (Des Rochers personal communication). Clare Ame, Information Specialist with the CFMDP project, says that the National Fisheries College in PNG offers no HIV/AIDS courses and very little HIV/AIDS awareness. CFMDP is developing a series of comic book stories, illustrated by local artists that contain information on HIV/AIDS targeted at grassroots fisheries workers. These comic strips are published in English and in Pidgin, and are distributed free of charge to all fishermen's associations, fishing companies, schools, hospitals and religious institutes (Des Rochers and Ame 2005).

Nina catches it (in Pidgin: Sans yah), by Biliso Osake, a local PNG artist, is based on a real incident. Two women are out fishing, but they are not catching anything and are

worried that they will not be able to feed their families. A large fishing boat approaches, and a sailor onboard offers fish in exchange for sex. Tania cautions Nina that she may get HIV if she does not use a condom but Nina has sex for one fish and is infected with HIV, which she passes to her husband. Directions and illustrations for using male and female condoms are included. *Nina lives with it*, by Clare Ame, is the story of how Nina learns to cope with the disease and teaches others how to protect themselves from being infected.

Ame plans to write four more comic strips. The one in progress tells the story of how sailors (usually men although some of the fisheries observer officers are women) who are absent for a long time have sex with multiple partners and then bring HIV and other STIs home to their partners, and how women can help each other. Most of the comic strips are directed towards behavior change.

HIV education for seafarers and fishers in the Pacific is conducted at 14 training institutes located across the region. One of the tasks of SPC's HIV/AIDS and STD project was to develop a module that would be included in the institutes' standard curriculum. In September 1997, SPC negotiated with the training institutes that HIV/AIDS training would become part of the standard curriculum. Every year the training colleges in the region collectively teach about 3000 Pacific Islanders, who are mostly between the ages of 18 and 40 (Armstrong 1998). The training uses the SPC 'Standard course: social responsibility' or the training manual 'HIV/AIDS and STDs among seafarers in the Pacific region' (1999). The course on social responsibility includes sections on family relationships, and the consequences for individuals, families and communities of unsafe sex. *HIV/AIDS and STDs among seafarers in the Pacific region* covers HIV infection and prevention in detail as well as behavior change techniques. Some institutes run courses over several one-hour sessions, or for up to one week.

At the training institutes, material is presented in the form of lectures, videos, information brochures, comic books and peer counseling. The training is voluntary in some of the colleges, while in others it is compulsory with a requirement that some knowledge of the disease and its prevention be demonstrated. In Samoa, the Solomon Islands, Federated States of Micronesia, Vanuatu, and Kiribati, graduates of the training institutes must pass a test on basic HIV information. The Marine Training Centre in Tarawa, in conjunction with UNICEF, undertook a three-month project for capacity building with seamen and their families in Kiribati on HIV/AIDS prevention. In Vanuatu, occasional two-week workshops have been run for peer educators working in the domestic shipping fleet. The safety courses are run in the national language (Bislama) for students in the domestic shipping industry and in English for seafarers who plan to work overseas. The latter include hospitality crew for P & O cruise vessels. Vanuatu offers continuing education on HIV/AIDS for working seafarers but not for fishers currently (Nalo personal communication). The Fisheries and Maritime Institute (FMI) in Colonia, Yap, Federated States of Micronesia, does not offer any continuing education or refresher courses for personnel working in the maritime industries.

The survey conducted for this paper asked respondents to rate various IEC tools in order of efficacy. Respondents from maritime training colleges in Vanuatu, Solomon Islands, Federated States of Micronesia, and Samoa all rated group lectures as most important, followed by videos, peer counseling and group discussion (Lafoai, Ewarmai, Daefa, Nalo personal communication).

Traditional printed information was not gauged as useful, but the response to grassroots style information was positive. The Solomon Islands Institute considered that 'lecturers need to be trained properly or to upgrade their knowledge on this topic' (Daefa personal communication). The institutes also reported that they needed more free condoms and more IEC materials written in simple language with illustrations, suitable for a very low literacy level.

NGOs and community groups are also promoting HIV/AIDS education for fishers and seafarers. In PNG, the TRANSEX project trains selected transport workers such as sailors, dockside workers and sex workers to become peer educators in HIV/AIDS and STD prevention. The TRANSEX project began in 1996 and was the first intervention research project designed 'to establish appropriate methods which can be applied to lessen the spread of HIV and STD in PNG' (Elly et al 1999). Information distribution, peer education and condom supply are key elements of this project. The Aids Task Force of Fiji (ATFF) works directly with sex-workers and their clients, including seafarers. Seafarers unions, where they exist, are supportive of HIV/AIDS/STI initiatives. There is a recent resurgence in the presence of Stella Maris and the Flying Angels missions at ports in the Pacific region, and these drop-in centers for seafarers provide information and condoms (Hogan personal communication).

Seafarers were the first Pacific Island employment group to be infected with HIV. The group is vulnerable to infection because seafarers spend long periods at sea, away from home and partners. Seafarers have a culture that they identify as the 'seafaring life' which involves alcohol, low condom use, multiple partners and group sex. Factors that exacerbate these risk factors are economics, gender attitudes, low literacy levels, language and cultural mores. The region has strong cultural taboos against talking about sex and island societies tend to be both patriarchal and strongly habituated against open discussion between sexual partners about safe sex. Just as literacy level and language specificity are significant factors in any communication strategy, they are especially important factors in this region because Pacific seafarers generally have a low level of education and need grassroots information such as comics, videos and peer education in local languages. While in training institutions, seafarers do receive some HIV prevention education, but there is little or no on-going education once they begin working. The development of IEC materials for Pacific Island seafarers and fishers crosses the boundaries of the health, fisheries, maritime, and gender sectors. These communication issues must be addressed in any information and communication strategy for HIV/AIDS prevention among this vulnerable group.

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